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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,331	04/04/2001	Jukka Suonvieri	4925-104PUS	8413

7590 12/27/2004

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EXAMINER

CHO, UN C

ART UNIT	PAPER NUMBER
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2687

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/786,331

Applicant(s)

SUONVIERI, JUKKA

Examiner

Un C Cho

Art Unit

2687

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 21, 22, 26, 28, 29, 31 – 35 and 38 – 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Bassirat (US 6,507,741).

Regarding claim 21, Bassirat discloses a method for detecting network elements relaying communications (RF repeater) between a base station and a mobile station (subscriber station) in a mobile communication network, said method comprising monitoring time delays associated with communications between base stations and mobile stations and determining whether a communication was relayed via at least one of the network elements by detecting an increased time delay as compared to a known time delay of mobile stations

communicating directly with the base stations (Bassirat, Col. 7, line 66 through Col. 8, line 67).

Regarding claim 22, Bassirat discloses identifying the communication relaying elements (RF repeater) on the ground of communication time delays (Bassirat, Col. 8, lines 37 – 44).

Regarding claim 26, Bassirat discloses that the mobile communication network is a GSM network (Bassirat, Col. 15, lines 48 – 55).

Regarding claim 28, Bassirat discloses time delays being monitored by a base transceiver station (Base Station, Bassirat, Col. 8, lines 42 – 44).

Regarding claim 29, Bassirat discloses time delays being monitored by a base station controller (Base station transmitting information to the mobile switching center, Bassirat, Col.8, lines 62 – 67).

Regarding claim 31, Bassirat discloses that said element is a radio repeater (RF repeater, Bassirat, Col. 7, lines 51 – 56).

Regarding claim 32, Bassirat discloses that said element is an optical tunneling configuration (optical fiber interface, Bassirat, Col. 7, lines 51 – 56).

Regarding claim 33, the claim is interpreted and rejected for the same reason as set forth in claim 21.

Regarding claim 34, the claim is interpreted and rejected for the same reason as set forth in claim 22.

Regarding claim 35, the claim is interpreted and rejected for the same reason as set forth in claim 26.

Regarding claim 38, the claim is interpreted and rejected for the same reason as set forth in claim 21.

Regarding claim 39, the claim is interpreted and rejected for the same reason as set forth in claim 28.

Regarding claim 40, the claim is interpreted and rejected for the same reason as set forth in claim 29.

Regarding claim 41, Bassirat discloses determining whether a communication was relayed via at least one of the network elements is performed without requiring any additional monitoring equipment to be located in the network element performing the relaying and without requiring any additional signaling to be generated by the network element performing the relaying (Bassirat, Col. 7, line 66 through Col. 8, line 67).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bassirat in view of Katz (US 6,643,526).

Regarding claim 23, Bassirat as applied to claim 21 above does not specifically disclose that a timing advance value corresponding to the said time

delay is calculated. In an analogous art, Katz discloses that the time advance information can be determined based on the delay (Katz, Col. 13, lines 63 – 35). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Katz to the system of Bassirat in order to provide the same frequency to be used simultaneously to transmit to two or even more different mobile stations which are arranged at different locations within the same cell.

5. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bassirat in view of Katz as applied to claim 23 above, and further in view of Suonvieri (US 6,047,181).

Regarding claim 24, Bassirat in view of Katz as applied to claim 23 above does not specifically disclose that the communications with timing advance values greater than some predetermined value. In an analogous art, Suonvieri discloses comparing the timing advance value to a predetermined value (Suonvieri, Col. 6, lines 5 – 14). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Suonvieri to the modified system of Bassirat and Katz in order to allow the radio capacity of a cell to be efficiently, flexibly and accurately allocated to a desired area within the cell.

6. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bassirat in view of Katz and further in view of Suonvieri as applied to claim 24 above, and further in view of Heyl et al. (US 5,613,010).

Regarding claim 25, Bassirat in view of Katz and further in view of Suonvieri as applied to claim 24 above does not specifically disclose that predetermined value is zero. In an analogous art, Heyl discloses that the predetermined value is zero (Heyl, Col. 7, lines 3 – 5). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Heyl to the modified system of Bassirat, Katz and Suonvieri to compare the signal to a reference signal.

7. Claims 27, 30, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bassirat in view of Prithviraj et al. (US 5,987,513).

Regarding claim 27, Bassirat does not specifically disclose sending an event notice to a network management system, when a presence of at least one of said elements is detected for the first time. In an analogous art, Prithviraj discloses sending an event trap to NMS (Network Management Stations), when a malfunction of one of said network element (Fig. 3, 360) is detected (Prithviraj, Col. 10, lines 3 – 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Prithviraj to the system of Bassirat in order to know significant events, which may have occurred around the time a problem has precipitated in the network.

Regarding claim 30, Bassirat in view of Prithviraj discloses monitoring the communication relayed via at least one of the repeaters (monitoring communication relayed through the repeaters, Bassirat, Col. 7, line 66 through Col. 8, line 67) and determining status information about the functioning of the network elements (Prithviraj, Col. 10 – lines 3 – 6).

Regarding claim 36, the claim is interpreted and rejected for the same reason as set forth in claim 27.

Regarding claim 37, the claim is interpreted and rejected for the same reason as set forth in claim 30.

#### ***Allowable Subject Matter***

8. The indicated allowability of claim 32 is withdrawn in view of the newly discovered reference(s) to Bassirat (US 6,507,741). Rejections based on the newly cited reference(s) follow.

#### ***Response to Arguments***

9. Applicant's arguments, see Page 7, filed 6/30/2004, with respect to the rejection(s) of claim(s) 21, 33 and 38 under 35 U.S.C. 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Bassirat (US 6,507,741).



***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Light et al. (US 5,930,293) discloses method and apparatus for achieving antenna receive diversity with wireless repeaters.

Adachi et al. (US 5,652,765) discloses receiver and repeater for spread spectrum communications.

Yamawaki (US 5,875,402) discloses a time-synchronous communication system.

Lemieux (US 5,594,739) discloses a system and method for rapid selection of synchronization sources in a mobile telecommunications network.

Kondo (US 5,722,080) discloses inter-station synchronization method.

Dejmek (US 5,263,175) discloses a diversity repeater that incorporates diversity diagnostic circuitry.

Fontenot (US 6,052,726) discloses delay calculation for a frame relay network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C Cho whose telephone number is (703) 305-8725. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (703) 306-3016. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Un C Cho 12/22/04 *UC*  
Examiner  
Art Unit 2687

*Lester G. Kincaid*  
12/22/04  
LESTER G. KINCAID  
PRIMARY EXAMINER